

Title (en)
SHOVEL

Title (de)
SCHAUFEL

Title (fr)
PELLETEUSE

Publication
EP 3521519 A4 20191016 (EN)

Application
EP 17856159 A 20170926

Priority
• JP 2016194484 A 20160930
• JP 2017034807 W 20170926

Abstract (en)
[origin: EP3521519A1] The shovel 1 includes a traveling body, an upper turning body turnably provided on the traveling body, and an attachment including a boom, an arm, and a bucket and attached to the upper turning body. The slip controlling part 500 corrects the motion of the boom cylinder 7 of the attachment in such a manner as to control a slip of the traveling body toward the back in the extension direction of the attachment.

IPC 8 full level
E02F 3/30 (2006.01); **E02F 3/32** (2006.01); **E02F 3/42** (2006.01); **E02F 3/43** (2006.01); **E02F 9/20** (2006.01); **E02F 9/22** (2006.01); **E02F 9/26** (2006.01)

CPC (source: EP KR US)
E02F 3/308 (2013.01 - EP); **E02F 3/32** (2013.01 - EP US); **E02F 3/425** (2013.01 - EP US); **E02F 3/435** (2013.01 - EP); **E02F 9/20** (2013.01 - EP); **E02F 9/2004** (2013.01 - US); **E02F 9/2037** (2013.01 - KR); **E02F 9/2075** (2013.01 - US); **E02F 9/2221** (2013.01 - KR); **E02F 9/2246** (2013.01 - US); **E02F 9/2253** (2013.01 - EP); **E02F 9/226** (2013.01 - EP); **E02F 9/24** (2013.01 - KR); **E02F 9/262** (2013.01 - US); **E02F 9/264** (2013.01 - US); **E02F 9/265** (2013.01 - EP)

Citation (search report)
• [E] EP 3392415 A1 20181024 - SUMITOMO HEAVY INDUSTRIES [JP]
• [A] US 2015284930 A1 20151008 - TSUKAMOTO HIROYUKI [JP]
• [A] US 2015284931 A1 20151008 - TSUKAMOTO HIROYUKI [JP]
• See references of WO 2018062209A1

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
EP 3521519 A1 20190807; EP 3521519 A4 20191016; EP 3521519 B1 20211117; CN 109689981 A 20190426; CN 109689981 B 20220412; JP 6941108 B2 20210929; JP WO2018062209 A1 20190718; KR 102403563 B1 20220527; KR 20190055075 A 20190522; US 11242666 B2 20220208; US 2019211526 A1 20190711; WO 2018062209 A1 20180405

DOCDB simple family (application)
EP 17856159 A 20170926; CN 201780055833 A 20170926; JP 2017034807 W 20170926; JP 2018542609 A 20170926; KR 20197006393 A 20170926; US 201916357784 A 20190319